

## AMENDMENTS TO THE CLAIMS

Please replace all previous versions of the claims with the following listing:

1. (Currently Amended) A process for production of energy in a pulp mill comprising the steps of:

~~, according to which process concentrating a waste liquor of a cellulose pulp digestion liquor is concentrated,~~

~~and this burning the concentrated liquor is burned~~ in a soda recovery boiler in the presence of biogenic fuels, and

recovering thermal energy of flue gases obtained from the burning ~~being recovered,~~

wherein at least part of the biogenic fuel ~~used is~~ a fuel gas from bark which is produced in the pulp mill in a debarking process, and

wherein essentially the entire bark amount produced in said debarking process is dried to a moisture content below 30% using waste heat of the pulp mill, whereafter at least part of the dried bark is gasified to produce ~~a the~~ fuel gas that is fed, at least in part, into the soda recovery boiler substantially continuously during the ~~burning of time in which~~ the concentrated liquor is burned in the soda recovery boiler.

2. (Currently Amended) The process according to Claim 1, wherein the bark is dried to a moisture content below 20%, whereafter it is gasified, and at least 40% by volume of the ~~gas thus produced~~ fuel gas produced from gasification is fed into the soda recovery boiler.

3. (Previously Presented) The process according to Claim 1, wherein ash is separated from the fuel gas before it is fed into the soda recovery boiler.

4. (Previously Presented) The process according to Claim 1, wherein the heat produced using at least a portion of the fuel gas is used for superheating soda

recovery boiler steam in a superheating chamber separate from the flue gases of the soda recovery boiler.

5. (Canceled)

6. (Currently Amended) The process according to Claim 1, wherein the waste heat for the drying of the bark ~~there are used~~ is provided by gases substantially having a temperature below 200°C.

7. (Currently Amended) The process according to Claim 6, wherein ~~there is used~~ the gases substantially having a temperature below 200°C are steam or flue gas having a temperature below 180°C.

8. (Currently Amended) The process according to Claim 1, wherein ~~as the energy~~ the waste heat for the drying of the bark ~~there is used~~ is provided by steam having a pressure of 0.1 to 100 bar.

9. (Currently Amended) A process for producing energy in a sulfate pulp mill, ~~according to which process~~ the process comprising:

- digesting, at least in part, wood material used for pulp production ~~is in part digested~~ in cooking liquor to separate fibers from each other,
- extracting the digested wood material ~~is extracted~~ as black liquor from the separated fibers,
- concentrating the black liquor ~~is concentrated~~ by evaporation, and
- burning the concentrated liquor ~~is burned~~ in a soda recovery boiler with fuel gas produced from bark to regenerate cooking chemicals and to produce heat and electricity ~~by using biogenic fuels,~~ wherein
  - bark is produced in a debarking process in the sulfate pulp mill,
  - essentially the entire bark amount is dried using waste heat of the pulp mill and at least part of the bark is brought into a gaseous form,

- formed ash is separated,
- a significant proportion of the fuel gas resulting from bringing the bark into gaseous form is burned in the same boiler, ~~equipped with heat recovery~~, as the concentrated liquor, the boiler being equipped with heat recovery for recovering heat from flue gas formed in the boiler, and
- the fuel gas is burned substantially continuously during the ~~burning of time in which~~ the concentrated liquor is burned in the soda recovery boiler.

10. (Canceled)

11. (Canceled)

12. (Canceled)

13. (Previously Presented) The process according to Claim 9, wherein the bark to be brought into a gaseous form is dried before the gasification to a moisture content of 5 to 40%.

14. (Currently Amended) The process according to Claim 9, wherein the bark is dried using heat remaining in flue gas formed in the soda recovery boiler after the heat recovery, by bringing the flue gas into direct contact with the ~~solid fuel bark~~ bark to be dried.

15. (Currently Amended) The process according to Claim 9, wherein the bark is dried using ~~as energy waste heat from~~ steam at a pressure level of 0.1 to 100 bar.

16. (Currently Amended) The process according to Claim 9, wherein the bark is dried using ~~as energy waste heat from~~ warm water that is present at the pulp mill.

17. (Currently Amended) The process according to Claim 9, wherein the soda recovery boiler includes a combustion chamber that is in the direction of the flow of flue gases divided into two parts in the direction of the flow of flue gases, wherein in the first ~~part of which~~ there is burned the fuel ~~that has been rendered gaseous~~ in gaseous form, the heat produced therefrom being used to a significant degree for superheating of steam, and wherein, in the second part there is burned the concentrated liquor, the heat released therefrom being used primarily for the vaporization of boiler water.

18. (Previously Presented) The process according to Claim 9, wherein a portion of the bark that has been brought into a gaseous form is, after the separation of ash, burned in a lime sludge reburning kiln and/or other units where its use replaces the use of fossil fuels.

19. (Currently Amended) An apparatus for producing, from wood bark, a biogenic fuel gas to be fed into a recovery boiler of a pulp mill, the apparatus being connected to a feed unit of the recovery boiler, wherein ~~it~~ the apparatus comprises as a combination

- a bark-drying unit having feed means for the wood bark to be dried and outlet means for the dried bark, the bark-drying unit being adapted to utilize waste heat of the pulp mill for drying, and
- a dried-bark gasifier for producing fuel gas from the dried bark, ~~the apparatus~~ dried-bark gasifier having feed means for bark and outlet means for fuel gas, the feed means of the gasifier being connected to the outlet means of the drying unit and the ~~gas~~ outlet means of the gasifier being connected to the feed unit of the recovery boiler to substantially continuously feed into the boiler the fuel gas produced from the dried bark by gasification ~~substantially continuously~~ during operation of the boiler.

20. (Currently Amended) The apparatus according to Claim 19, wherein the drying unit comprises at least two separate dryers, each having feed means for the bark to be dried and outlet means for dried bark, the dryers being

~~which are~~ arranged as a dryer cascade, the outlet means of the dryer subsequent in the series being connected to the feed means of the gasifier.

21. (Currently Amended) The apparatus according to Claim 20, wherein between the first and the second dryer there is arranged a pretreatment unit for treating the bark ~~obtained from exiting the first drier dryer~~ before it is fed into the second ~~drier dryer~~, the pretreatment unit having a feed unit connected to the outlet means of the first ~~drier dryer~~ and an outlet unit connected to the feed means of the second dryer.

22. (Previously Presented) The apparatus according to Claim 21, wherein the pretreatment unit comprises a grinder.

23. (Previously Presented) The apparatus according to Claim 20, wherein flue gases and/or steam are used for the drying in at least in one of the dryers.

24. (Previously Presented) The apparatus according to Claim 20, wherein the first dryer comprises a bed dryer.

25. (Previously Presented) The apparatus according to Claim 20, wherein the second dryer comprises a fluid-bed dryer.

26. (Previously Presented) The apparatus according to Claim 19, wherein the gasifier is a fluid-bed boiler having an ebullating or rotary bed.

27. (Currently Amended) The apparatus according to Claim 19, wherein the outlet means of the gasifier is connected to the feed unit of the recovery boiler through a gas purification unit to separate impurities from the fuel gas before it is fed into the recovery boiler.

28. (Currently Amended) The process according to Claim 8, wherein ~~as the energy the waste heat~~ for the drying of the bark ~~there is used~~ is provided by steam having a pressure of 2 to 14 bar.

29. (Currently Amended) The process according to Claim 9, wherein the ~~solid fuel bark~~ to be brought into a gaseous form is dried to a moisture content of 10 to 15% before the gasification ~~to a moisture content of 10 to 15%~~.

30. (Currently Amended) The process according to Claim 9, wherein the ~~solid fuel bark~~ is dried using as energy waste heat from steam at a pressure level that is the distribution pressure of the mill's bled steam or back-pressure steam network.

31. (Currently Amended) The process according to Claim 30, wherein the ~~solid fuel bark~~ is dried using as energy waste heat from steam at a pressure level of 2 to 14 bar.

32. (Currently Amended) The process according to Claim 1, wherein waste heat from flue gas of the soda recovery boiler is used for drying the bark.

33. (Currently Amended) The process according to Claim 32, wherein the exit ~~fuel~~-gases from the drying of the bark are combined with the flue gases from the soda recovery boiler.

34. (Previously Presented) The process according to Claim 1, wherein essentially the entire bark amount produced in said debarking process is gasified.

35. (Currently Amended) The process according to Claim 1, wherein a portion of the ~~bark-fuel~~ gas is burned in a lime sludge reburning kiln of the pulp mill.

36. (Currently Amended) The process according to Claim 1, wherein all of the ~~bark-fuel~~ gas is fed into the soda recovery boiler.

37. (Currently Amended) The process according to Claim 1, wherein waste heat from warm water present at the pulp mill is used for drying the bark.

38. (Currently Amended) The process according to Claim 9, wherein waste heat from flue gas of the soda recovery boiler is used ~~as a drying gas for~~ drying the bark.

39. (Currently Amended) The process according to Claim 38, wherein ~~the~~ exit gases from the drying of the bark are combined with the flue gases from the soda recovery boiler.

40. (Previously Presented) The process according to Claim 9, wherein the entire bark amount produced in said debarking process is gasified.

41. (Currently Amended) The process according to Claim 9, wherein waste heat from steam is used ~~as a drying gas for~~ drying the bark.

42. (Currently Amended) The process according to Claim 9, wherein all of the ~~bark-fuel~~ gas is fed into the soda recovery boiler.

43. (Currently Amended) The apparatus according to Claim 19, wherein the bark-drying unit utilizes waste heat from warm water present at the pulp mill for drying the bark.